

# Fluid-Dynamic-Pressure Bearing, Spindle Motor Furnished with the Fluid-Dynamic-Pressure Bearing, Method of Manufacturing Rotor Assembly Applied in the Spindle Motor, and Recording-Disk Drive Furnished with the Spindle Motor

## Abstract

Fluid-dynamic-pressure bearing furnished with a shaft, a top plate fixed to an upper portion of the shaft, a thrust plate fixed to a lower portion of the shaft, a sleeve, and a cuplike bearing housing that along its inner periphery retains the sleeve. A lubricating-fluid-filled continuous micro-gap is formed in between the shaft and the sleeve and the top plate and the sleeve. Radial bearing sections are formed in between the shaft cylindrical outer surface and the sleeve cylindrical inner surface. An upper thrust bearing section is formed in between the undersurface of the top plate and the top-edge face of the bearing housing. A lower thrust bearing section formed in between the bottom margin of the

sleeve and the top margin of the thrust plate. The bearing sections are each provided with dynamic-pressure-generating grooves for inducing dynamic pressure in the lubricating fluid when the shaft or sleeve spins.